NASA POLICY DIRECTIVE

Directive: NPD 8610.23A
Effective Date: March 02, 2000
Expiration Date: March 02, 2005

Responsible Office: M / Office of Space Flight

Subject: Technical Oversight of Expendable Launch Vehicle (ELV) Launch Services

1. POLICY

a. This Directive establishes the NASA policy for Government technical oversight of ELV launch services provided by commercial launch service providers. NASA remains accountable for the success of its missions launched with commercially provided ELV launch services, since launch remains a high risk element affecting mission success.

b. Commercial launch service providers direct administrative and technical tasks associated with the launch service. NASA's technical oversight approach seeks to ensure the successful performance of the launch services and has transitioned from total program visibility and control to specific areas of program approval and insight.

c. Consistent with the responsibility to ensure the highest practicable probability of launch success, NASA shall retain involvement in and control of the launch through a technical oversight approach which combines focused approvals and technical insight of contractor launch activities.

d. For purposes of this directive, Government Insight means acquiring knowledge and understanding of contractors actions by monitoring of selected metrics and/or milestones through watchful observation, documentation review, meeting attendance, reviews, tests, and compliance evaluations. NASA retains the ability to nonconcur with a contractors proposed actions for a NASA launch service based upon knowledge obtained during Insight activities.

e. For purposes of this directive, Government Approval entails providing the launch service contractor authority to proceed and/or formal acceptance of requirements, plans, tests, or success criteria in specified areas.

2. APPLICABILITY

This Instruction applies to NASA Headquarters, NASA Centers and their Component Facilities, and the Jet Propulsion Laboratory to the extent specified in its contract. NASA launches identified at the ELV Flight Planning Board as able to tolerate higher risk launch services as defined

in NPD 8610.7 may utilize a modified technical oversight approach. Application of this approach to launches purchased under spacecraft contracts for on-orbit services or other innovative contractual arrangements will be reviewed on a case by case basis.

3. AUTHORITY

42 U.S.C. 2473(c)(1), Section 203(c)(1) of the National Aeronautics and Space Act of 1958, as amended.

4. REFERENCE

a. 42 U.S.C Sections, 2465b etseq., Launch Services Purchase Act of 1990 (P.L. 101-611), as amended.

b. NPD 8610.24A, "Expendable Launch Vehicle Launch Services Prelaunch Readiness Reviews."

c. NPD 8610.7, "Launch Services Risk Mitigation Policy for NASA-Owned, NASA-Sponsored Payloads."

d. NASA HOW18682-M012, Code M Expendable Launch Vehicles (ELV) Manifest Process.

e. Program Management Plan for the Lead Center for the Acquisition and Management of ELV Launch Services at KSC.

5. RESPONSIBILITY

a. The Associate Administrator of Space Flight is responsible for the NASA ELV Program and provides necessary resources to support implementation of this directive.

b. The Office of Space Flight Director, ELV Requirements, is responsible for:

1) Assessing center implementation consistent with this policy directive.

2) Documenting approved exceptions, waivers and deviations to the ELV technical oversight approach for specific missions at an ELV Flight Planning Board.

3) Reviewing and coordinating any reduced technical oversight approach with the General Counsel to assess applicability of Federal Aviation Administation (FAA) launch licensing authority.

4) Assessing the applicability of this technical oversight approach to on-orbit service acquisitions or other innovative contractual approaches for launch in advance of contract award in coordination with the NASA Chief Engineer, affected Enterprise Deputy Associate Administrator, and the Office of Safety and Mission Assurance.

5) Developing a NASA Policy Guideline which provides policy guidance on balancing NASA Risk Mitigation Strategy (NPD 8610.7) with Technical Oversight Policy to enable mission unique tailoring.

c. The ELV Program Manager at Kennedy Space Center is responsible for

assuring all NASA launch service contracts:

1) Include the Government's Approval and Insight requirements and rights as outlined in Attachment A to this policy directive.

2) Permit independent verification/validation assessment by NASA of selected critical mission analyses, procedures, processes, tests, and acceptance criteria to obtain the maximum practicable probability of launch success.

3) Permit approval by NASA of all mission-unique analyses, spacecraft to launch vehicle interfaces, designs, and test procedures.

4) Permit substantial involvement in, control of, and final approval by NASA for the final "go-for-launch" decision.

5) Identify contractor assurance activities and permit NASA assurance activities including verification of contractor implementation of assurance activities through a formal NASA audit process.

6) Protect the U.S. public health, safety, and property; comply with all applicable statutory and regulatory environmental requirements; and preserve the national security as well as foreign policy interests from risks attendant with a government launch.

d. All Enterprise Associate Administrators are responsible for assuring that any proposed deviations to this policy are brought to OSF attention and disposition through the ELV Flight Planning Board process.

6. DELEGATION OF AUTHORITY

None.

7. MEASUREMENTS

a. Compliance with this NPD will be evaluated on a continuing basis by OSF ELV Requirements Director and the ELV Program Office.

b. The ELV Program Manager shall provide OSF ELV Requirements Director a record of lessons learned and maintain a data base of NASA contributions to mission success as a result of NASA technical oversight after each NASA-acquired launch.

8. CANCELLATION

NMI 8610.23, "Technical Oversight of Expendable Launch Vehicle (ELV) Launch Services," dated August 23, 1992.

/s/ Daniel S. Goldin
Administrator

ATTACHMENT A: (TEXT)

NASA technical oversight of launch services provided by the private sector has two elements: Approval and Insight.

a. Specific areas requiring Government Approval are --

(1) Spacecraft-to-launch vehicle interface control documents/drawings.

(2) Decisions/resolutions of action items as determined by joint NASA/contractor Mission Integration Working Groups.

(3) Mission-unique hardware design, analysis, manufacture, and test.

(4) Mission-unique software design, analysis, and test.

(5) Contractors Risk Management and Systems Effectiveness Plan/Approach, consistency with intent of NASA NPD 8730.3, NPG 7120.5 and NPG 8715.

(6) Top-level test plans, requirements, and success criteria for Integrated Vehicle Systems and for tests that verify the integrated vehicle interfaces.

(7) Launch commit criteria.

(8) Closeout of actions from NASA-Chaired Mission and Flight Readiness Reviews.

(9) Spacecraft handling procedures and deviations.

(10) Integrated spacecraft/vehicle mate, test, and closeout procedures and deviations.

(11) Integrated spacecraft/vehicle mate, test, and closeout as-run procedures and deviations.

(12) Launch countdown procedures and deviations that affect spacecraft/vehicle integrated assembly.

(13) Anomaly resolutions that affect the integrated assembly.

(14) Launch Go/No-Go.

b. Specific areas to be open to Government Insight are --

(1) Baseline vehicle design, analyses, and configuration management.

(2) Production program reviews, plans, and schedules.

(3) Production and systems test and Material Review Boards.

(4) Critical flight hardware pedigree.

(5) Safety and Mission Assurance compliance evaluations (prime and subcontractors).

(6) Changes to the Contractors System Effectiveness Plans.

(7) Pre-ship reviews.

(8) Design and qualification reviews.

(9) Major/critical problems.

(10) Major system and integrated systems tests.

(11) Post-test data.

(12) Anomaly resolutions.

(13) Failure analysis.

(14) Vehicle/ground support equipment procedures.

(15) Launch site support work schedules and plans.

(16) Launch site vehicle preparations and closeout data.

(17) Vehicle walkdown inspections.

(18) Operations and procedure discipline.

(19) Work practices and documentation.

(20) Conduct of contractor-chaired Mission, Launch, and Flight Readiness Reviews.

(21) Postflight vehicle, tracking, and range data.

(22) Postflight anomaly investigations/closeouts.

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